

March 10, 1853.

LORD WROTTESELEY, V.P., in the Chair.

The following letter, addressed to Michael Faraday, Esq., and by him communicated to the Society, was read :—

Dunse (N. Britain), March 1, 1853.

DEAR SIR,—In the report in the Athenæum of your lecture at the Royal Institution on the 21st of January, I observe that you refer to the highly interesting observations of Schwabe, Sabine, Wolf, Gautier, &c., from which it would appear that a connection exists between the solar spots and the variations of the terrestrial magnetic forces. Since a connection has been demonstrated to exist between the latter and auroral phenomena, I was induced to look over my notes relating to the auroræ observed at this place, with a view to ascertain whether these also exhibited maxima and minima, and if so, whether the periods of such agreed with those of the solar spots and of the magnetic variations. The subjoined table shows the distribution of the auroræ seen here in the years 1838 to 1847 inclusive :—

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Sum.
1838	5	3	4	3	...	...	...	2	4	1	2	3	27
1839	9	1	2	4	1	...	...	...	11	7	2	1	38
1840	5	5	2	4	...	...	...	3	7	6	6	5	43
1841	6	3	4	4	2	...	...	3	3	3	7	7	42
1842	2	2	...	...	...	...	1	...	3	...	1	...	9
1843	2	1	1	1	...	...	...	2	...	3	...	...	10
1844	1	...	2	...	...	...	...	...	1	3	4	2	13
1845	1	2	...	1	...	...	...	1	2	1	1	1	10
1846	...	1	...	...	...	...	1	2	7	4	1	...	16
1847	2	2	3	1	...	...	...	1	5	6	6	4	30
	33	20	18	18	3	...	2	14	43	34	30	23	238

These figures speak for themselves. I may remark that the returns for 1842 are incomplete, as I was absent from home during March and April of that year. In 1848 I was also absent for some months, but from the number of auroræ which I have noted during that year, I am satisfied that a maximum then occurred, both as regards the number and the intensity of auroral displays.— This present winter has been very barren in auroral phenomena.

Of crimson auroræ I find I have noted two in 1837, one in 1839, one in 1846, three in 1847, and no less than six in 1848.

A discussion of the auroræ seen in North America and the North of Europe during a series of years would be interesting with reference to the points in question.

Apologizing for troubling you,

I am, dear Sir,

With the greatest respect, yours faithfully,

WM. STEVENSON.